

(19) World Intellectual Property
Organization
International Bureau



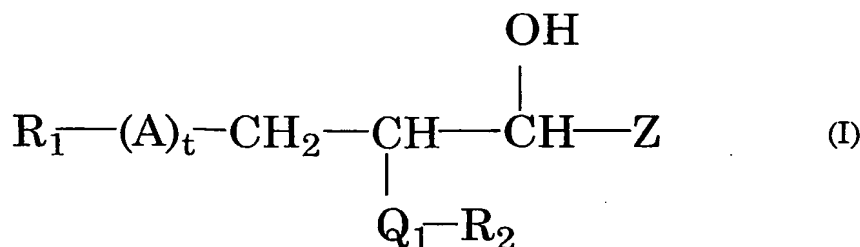
(43) International Publication Date
22 September 2005 (22.09.2005)

PCT

(10) International Publication Number
WO 2005/087023 A1

- (51) International Patent Classification⁷: **A23L 1/30**, A61K 31/688, 31/164, 31/133, A61P 3/10
- (74) Agent: **WINCKELS, J.H.F.**; Johan de Wittlaan 7, NL-2517 JR Den Haag (NL).
- (21) International Application Number: PCT/NL2005/000193
- (22) International Filing Date: 15 March 2005 (15.03.2005)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
04075848.4 16 March 2004 (16.03.2004) EP
04077088.5 19 July 2004 (19.07.2004) EP
- (71) Applicant (for all designated States except US): **Nederlandse Organisatie voor toegepast-natuurwetenschappelijk Onderzoek TNO** [NL/NL]; Schoemakerstraat 97, NL-2628 VK Delft (NL).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): **NIEUWEN-HUIZEN, Willem, Ferdinand** [NL/NL]; Provincialeweg 61A, NL-3981 AM Bunnik (NL). **HAVEKES, Aloysius, Maria** [NL/NL]; Lokhorst 9, NL-2402 PP Alphen aan den Rijn (NL). **EMEIS, Josephus, Jan** [NL/NL]; Hoogte Kadijk 37C, NL-1018 BE Amsterdam (NL).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).
- Published:
— with international search report
- For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: THE USE OF SPHINGOLIPIDS IN THE TREATMENT AND PREVENTION OF TYPE 2 DIABETES MELLITUS, INSULIN RESISTANCE AND METABOLIC SYNDROME



(57) Abstract: The present invention relates to the use of sphingolipids for the preparation of a food item, a food supplement and/or a medicament for the treatment and/or prevention of insulin resistance, diabetes mellitus type 2 and/or Metabolic Syndrome. In particular, the invention relates to the use of a sphingolipid with the general formula (I): wherein Z is R₃ or -CH(OH)-R₃; A is sulphate, sulphonate, phosphate, phosphonate or -C(O)O-; R₁ is H, hydroxyl, alditol, aldose, an alcohol, C₁-C₆ alkyl or amino acid; R₂ is H or unsaturated or saturated (C₁-C₃₀) alkyl chain; R₃ is unsaturated or saturated (C₁-C₃₀) alkyl chain; Q₁ is a primary amine group (-NH₂), secondary amine group (-NH-) or an amide group (-NH-CO-); and t is 0 or 1, or a precursor, a derivative or a pharmaceutically acceptable salt thereof, for the manufacture of a medicament for the prevention and/or treatment of a disorder selected from the group consisting of insulin resistance, diabetes type 2 and Metabolic Syndrome.

Express Mail Number

EV 559896881 US

WO 2005/087023 A1